

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Adedeji, et al.)	
)	Group Art Unit: 1714
Serial No.:	10/771,784)	
)	
Filed:	February 4, 2004)	
)	Examiner: Szekely
For:	HIGH PERFORMANCE PLASTIC)	
	PALLETS)	

Amendment

Via Electronic Filing System
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Amendment is submitted in response to the Office Action dated August 29, 2006.

Please amend the Application as follows:

IN THE CLAIMS

1. - 16. (Canceled)

17. (Currently amended) A plastic pallet comprising:

a polyphenylene ether resin;

a polystyrene resin consisting of a random polystyrene copolymer, a rubber-modified polystyrene, or a combination thereof; and

at least one flame retardant in an amount sufficient to impart a degree of flame retardancy to the pallet to pass UL 2335 protocol for pallets, wherein the at least one flame retardant is present in about 10 to about 30 parts based on 100 parts by weight of the polyphenylene ether resin, polystyrene resin and flame retardant together;

wherein the pallet is suitable for commodity storage and meets or exceeds Underwriters Laboratory UL 2335 protocol for pallets.

18. (Previously presented) The plastic pallet of claim 17, wherein the flame retardant is an organophosphate.

19. (Previously presented) The plastic pallet of claim 18, wherein the organophosphate is an aromatic phosphate compound of the formula



where R is the same or different and is alkyl, cycloalkyl, aryl, alkyl substituted aryl, halogen substituted aryl, aryl substituted alkyl, halogen, or a combination of any of the foregoing, provided at least one R is aryl.

20. (Previously presented) The plastic pallet of claim 17, further comprising an impact modifier.

21. (Previously presented) The plastic pallet of claim 17, further comprising at least one additive, wherein the additive is selected from the group consisting of mineral filler, clay, reinforcing agent, glass fiber, glass flakes, glass spheres, plasticizer, stabilizer, colorant, processing aids, and a combination of the foregoing additives.

22. (Previously presented) The plastic pallet of claim 17, wherein the pallet comprises:

about 30 to about 70 parts of the polyphenylene ether resin,

about 20 to about 60 parts of the polystyrene resin, and

about 10 to about 30 parts of the flame retardant, wherein all weights are based on 100 parts by weight of the polyphenylene ether resin, polystyrene resin and flame retardant together.

23. (Currently amended) A plastic pallet consisting of:

a polyphenylene ether resin;

a high impact polystyrene;

at least one flame retardant in an amount sufficient to impart a degree of flame retardancy to the pallet to pass UL 2335 protocol for pallets, wherein the at least one flame retardant is present in about 10 to about 30 parts based on 100 parts by weight of the polyphenylene ether resin, polystyrene resin and flame retardant together; and

at least one impact modifier,

wherein the pallet is suitable for commodity storage and meets or exceeds Underwriters Laboratory UL 2335 protocol for pallets.

24. (Currently amended) A method for making a plastic pallet comprising:

injection molding a composition comprising polyphenylene ether resin; a polystyrene resin consisting of a random polystyrene copolymer, a rubber-modified polystyrene, or a combination thereof; and at least one flame retardant in an amount necessary to impart a degree of flame retardancy to the pallet to pass the UL 2335 protocol for pallets, wherein the at least one flame retardant is present in about 10 to about 30 parts based on 100 parts by weight of the polyphenylene ether resin, polystyrene resin and flame retardant together; wherein the pallet is suitable for commodity storage and meets or exceeds Underwriters Laboratory UL 2335 protocol for pallets.

REMARKS

Claims 17-24 are pending in the present Application. Claims 17, 23, and 24 have been amended, no claims have been added or canceled, leaving claims 17-24 for consideration upon entry of the present Amendment. No new matter has been introduced by these amendments. Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and the following remarks.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 17-24 stand rejected under 35 U.S.C. 103(a) as allegedly obvious over Abolins et al. 4,504,613 (hereinafter "the '613 patent") or Lee, Jr. 5,008,314 (hereinafter "the '314 patent"). Applicants respectfully disagree.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness, i.e., that all elements of the invention are disclosed in the prior art; and that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

The '613 patent generally discloses that the ductile impact strength and tensile elongation of flame retardant compositions of a polyphenylene ether resin and a poly(alkenyl aromatic) are upgraded by the addition of only small amounts, typically from about 0.1 to about 10 parts by weight, of high molecular weight polyfunctional esters or low molecular weight saturated polyesters (abstract).

The '314 patent generally discloses a thermoplastic blend for molding articles with resistance to environmental stress cracking and with good melt flow properties comprising a polyphenylene ether resin having a low intrinsic viscosity and a polystyrene resin having a high intrinsic viscosity. The composition can further contain an impact modifier and/or a flame retardant (abstract).

Independent claims 17 and 23 are directed to pallets that meet or exceed Underwriters Laboratory UL 2335 protocol for pallets. Independent claim 24 is

directed to a method of forming a plastic pallet via injection molding polyphenylene ether resin; a polystyrene resin consisting of a random polystyrene copolymer, a rubber-modified polystyrene, or a combination thereof; and at least one flame retardant to result in a plastic pallet that meets or exceeds Underwriters Laboratory UL 2335 protocol for pallets.

It will be shown that the cited references i) fail to teach each and every limitation of the independent claims, and ii) the references provided no suggestion or incentive that would have motivated the skilled artisan to modify the references or combine the references.

First, none of the references teach plastic pallets, let alone a plastic pallet prepared from a polyphenylene ether resin; a polystyrene resin consisting of a random polystyrene copolymer, a rubber-modified polystyrene, or a combination thereof; and at least one flame retardant in an amount sufficient to impart a degree of flame retardancy to the pallet to pass UL 2335 protocol for pallets.

The Examiner states in the Office Action dated August 29, 2006 that

Applicants' claimed pallet has no structure and it is just another molded article, which can be conveniently molded from flame-retardant, impact resistant molding compounds. It would have been obvious to one having ordinary skill in the art; at the time the invention was made, to use the compounds of the cited references for molded plastic pallets.

(Office Action dated August 29, 2006, page 2.) The Applicants respectfully disagree as it is clear that the pallet of the claims is a large structure meeting a general shape and size suitable for the storage of commodities. Indeed the UL 2335 protocol includes idle storage and *commodity classification tests*. (See UL's The Code Authority, Vol. 7, No. 1, 1998, page 1.) The commodity classification tests

measure the amount of heat released by commodities or contents stored on plastic pallets, such as those found in real-life warehouse applications. If heat release results demonstrate that the plastic pallets do not increase the heat generated by the Class II commodities during the fire test, then the commodity classification of the plastic pallets is equivalent to wood.

(UL's The Code Authority, Vol. 7, No. 1, 1998, pages 1-2.) Accordingly, it is respectfully pointed out that the claimed pallet does not lack structure and is not "just another molded article" as argued by the Examiner. The claimed pallets are directed to those large structures used to hold commodity items for storage in warehouses. Exemplary pallet structures are disclosed in the Specification as filed including those meeting the Grocery Manufacturing Association requirements for pallets, i.e., 48" x 40"; 4-way entry; accommodate pallet jacks; have a smooth, non-skid, top load bearing surface having at least 85% coverage; a bottom loading surface and have cut-outs for pallet jack wheels from four (4) sides; rackable from 48" and 40" dimension; recyclable; desired weight under 50 pounds; have a load capacity of 2,800 pounds; capable of bearing 2,800 pound loads safely in stacks of 5 loads high racking; and weather and moisture resistant. (Specification, page 4.)

Accordingly, as the pallets of the instant claims do not lack structure and are not just another molded article, the cited references fail to teach or suggest each and every claim limitation of the claims since they do not teach pallets, let alone pallets meeting or exceeding UL 2335 protocol.

Notwithstanding the above argument, the independent claims have been amended to contain the term "wherein the pallet is suitable for commodity storage" to clearly indicate the general structure of the pallet. Such language is supported in the Specification as filed at page 3 and the claims as filed as the UL 2335 protocol includes a commodity classification test.

Furthermore, the references fail to provide any suggestion or motivation to prepare plastic pallets from a polyphenylene ether resin; a polystyrene resin consisting of a random polystyrene copolymer, a rubber-modified polystyrene, or a combination thereof; and at least one flame retardant in an amount sufficient to impart a degree of flame retardancy to the pallet to pass UL 2335 protocol for pallets. Although the '613 patent teaches a laundry list of articles, none of the articles are similar to pallets, and none would suggest the use of the disclosed resins for pallets meeting the stringent flame retardancy requirements. Pallets used to store commodities are required to be of a general size, shape, and strength to function as storage tools. The articles of the '613 patent are directed to items that do not require strength to hold thousands of

pounds of weight, and most are directed to small items (e.g., decorative trim, small appliances, etc.). The only large items are arguably the laundry and dishwasher consoles and automobile consoles. None of these are required to withstand thousands of pounds of weight or to withstand any of the conditions expected for storage pallets. As the laundry list of articles of the reference are very different from plastic storage pallets, in terms of size, strength, flame retardant qualities, and environment of use, there is no suggestion or motivation to prepare pallets from the materials of the cited references to meet the stringent requirements of UL 2335. Reconsideration and removal of the rejections are respectfully requested.

Information Disclosure Form 1449 with Incomplete Initialing

It is respectfully noted that the three references (JP 05096587, JP 05337993, and www.kwpc.com/kwpc/markets/directex (3,5,6 and overview)) on page 7 of the Information Disclosure Statement that was mailed on May 10, 2004 were not initialed by the Examiner. The Applicants respectfully request an initialed Information Disclosure Citation sheet with the next substantive action.

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance are requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 50-1131.

Respectfully submitted,

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